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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,743	07/21/2005	Joerg Barthel	10191/3824	6130

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EXAMINER	
MALEK, LEILA	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
12/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,743	BARTHEL ET AL.	
	Examiner	Art Unit	
	LEILA MALEK	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-19 and 21-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-19 and 21-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 August 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/14/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements submitted on 08/14/2008 has been considered and made of record by the examiner.

Drawings

2. The drawings were received on 08/14/2008. These drawings are accepted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 15-19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacevic et al. (hereafter, referred as Kovacevic) (US 6,674,805), in view of Fujii et al. (hereafter, referred as Fujii) (US 6,816,491).

As to claim 15, Kovacevic discloses a method, comprising: generating the digital data streams (see e.g. Fig. 50, since all the units work at digital mode, it inherently means that the incoming signal is in digital form) in a transmitting device by sampling at a sampling frequency synchronized by a system time clock in the transmitting device (see column 2, lines 27-32, wherein the time base of 27 MHZ has been interpreted as sampling frequency. The signal is in digital form, therefor it must be sampled according to the sampling frequency) and synchronizing the system time clock counter with the determined sampling frequency (i.e. 27 MHZ) of the one of the data streams (see

column 2, lines 28-32). Kovacevic further discloses incrementing the system time clock counter (see column 42, lines 13-14), and determining the increment from a ratio between a program clock reference (PCR) and the sampling frequency (see the output of block 5020, wherein control unit compares the PCR value with the output of STC register (i.e. the sampling frequency value)). Kovacevic does not expressly disclose determining the sampling frequency of one of the data streams in the receiving device. Fujii, in the same field of endeavor, discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc (see column 5, lines 14-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kovacevic as suggested by Fujii to extract the sampling frequency information at the receiver in order to facilitate the decoding process.

As to claim 16, Kovacevic discloses setting the increment to a constant value (i.e. the STC-CLK, see column 42, lines 13-32) based on a nominal sampling frequency (i.e. 27 MHZ).

As to claim 17, Kovacevic further discloses that the synchronization unit compares an instantaneous value of the presentation time stamp of the packetized elementary data stream used to determine the sampling frequency with an instantaneous count of the system time clock counter, and the synchronization unit

corrects an increment of the system time clock counter according to a comparison result (see column 2, lines 11-15 and column 43, lines 9-16).

As to claim 18, neither Kovacevic nor Fujii discloses determining the sampling frequency from the data stream having the greatest sampling frequency of any of the available data streams. However, it is also well known in the art from Nyquist criterion that a required sampling rate for sampling a signal of frequency f_0 is at least twice the frequency of the signal. Therefore, one of ordinary skill in the art would have been motivated to use a sampling rate which is at least twice the sampling rate of the higher frequency so as to cover the sampling rate requirement of the lower frequencies as well.

As to claim 19, Kovacevic further discloses that the data streams are packetized elementary data streams (see Fig. 3) that include compressed video and audio data streams (see column 1, lines 58-59 and column 2, lines 27-30) according to the MPEG standard (see column 1, last paragraph).

As to claim 27, Kovacevic does not expressly disclose that the sampling frequency is determined from a selected packetized elementary data stream of different packetized elementary data streams. However it is well known in the art from Nyquist criterion that a required sampling rate for sampling a signal of frequency f_0 is at least twice the frequency of the signal. Therefore, one of ordinary skill in the art would have been motivated to use a sampling rate which is at least twice the sampling rate of the higher frequency (i.e. the frequency of a selected packetized elementary data stream) so as to cover the sampling rate requirement of the lower frequencies as well.

Kovacevic discloses that all packetized elementary data streams are synchronized with the counter (see column 2, lines 27-32).

4. Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al. (hereafter, referred as Duruoz) (US 6,363,207), Kovacevic, Fujii, and further in view of Kovacevic et al. (US 6,988,238).

As to claim 21, Duruoz discloses a receiver device (see the abstract), comprising: a transport data stream demultiplexer for demultiplexing a transport data stream into packetized elementary data streams (see the abstract and column 6, lines 43-45) and identifying a presentation time stamp for the purpose of initializing a system time clock counter (see column 2, lines 14-16) and an output control unit for synchronizing data streams obtained from the packetized elementary data streams (see column 1, lines 38-40, column 2, lines 23-26, column 9, lines 28-42). Duruoz discloses all the subject matters claimed in claim 21, except for a unit for correctly determining a sampling frequency of one of the packetized elementary data streams and a synchronization unit for synchronizing the counter according to the sampling frequency; wherein the synchronization unit sets an increment of the counter, the increment being determined from a ratio between a program clock reference and a nominal sampling frequency. Duruoz also does not disclose that the presentation time stamp has been identified by extracting flags. Kovacevic discloses an apparatus for generating the digital data streams (see e.g. Fig. 50, wherein all the units work at digital mode, it inherently means that the incoming signal is in digital form) in a transmitting device by sampling at a sampling frequency synchronized by a system time clock in the transmitting device

(see column 2, lines 27-32, wherein the time base of 27 MHZ has been interpreted as sampling frequency, the signal is in digital form, therefor it must be sampled according to the sampling frequency) and synchronizing (therefore inherently there is a synchronizing unit) the system time clock counter with the determined sampling frequency (i.e. 27 MHZ) of the one of the data streams (see column 2, lines 28-32), wherein the synchronization unit sets an increment of the counter (see column 42, lines 13-14), the increment being determined from a ratio between a program clock reference and a nominal sampling frequency (see the output of block 5020, wherein control unit compares the program clock reference value with the output of STC register (i.e. the nominal sampling frequency value)). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32). Kovacevic does not expressly disclose determining the sampling frequency of one of the data streams at the receiving device. Fujii, in the same field of endeavor, discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc (see column 5, lines 14-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz and Kovacevic as suggested by Fujii to extract the sampling frequency information at the receiver in order to facilitate the decoding process. Duruoz, Kovacevic, and Fujii, disclose all the subject matters claimed in claim 21, except that the

presentation time stamp has been identified by extracting flags. Kovacevic et al. discloses an apparatus for detecting and handling MPEG transport stream errors (see column 1, first paragraph). Kovacevic et al. further discloses that a presentation time stamp (PTS) has been identified by extracting flags (see columns 45-46). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz, Kovacevic, and Fujii as suggested by Kovacevic et al. to facilitate the recovery of the presentation time stamps.

As to claim 22, Kovacevic discloses setting the increment to a constant value (i.e. the STC-CLK, see column 42, lines 13-32) based on a nominal sampling frequency (i.e. 27 MHZ). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32).

As to claim 23, Kovacevic further discloses that the synchronization unit compares an instantaneous value of the presentation time stamp of the packetized elementary data stream used to determine the sampling frequency with an instantaneous count of the system time clock counter, and the synchronization unit corrects an increment of the system time clock counter according to a comparison result (see column 2, lines 11-15 and column 43, lines 9-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32).

As to claim 24, Fujii discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc (see column 5, lines 14-16). Fujii does not disclose an output control unit that synchronizes all packetized elementary data streams with the counter. However, Kovacevic discloses that the value of the STC counter is synchronized such that the value of the STC counter can be compared to PTS time stamps to determine when the data is to be decoded (see column 43, lines 9-16). Kovacevic further discloses that by comparing the values of the PTS time stamps to the STC and rendering the data associated with the PTS time stamps when a match occurs, synchronized presentation of audio and video data is obtained (see column 2, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32).

As to claim 25, none of the above references disclose determining the sampling frequency from the data stream having the greatest sampling frequency of any of the available data streams. However, it is also well known in the art from Nyquist criterion that a required sampling rate for sampling a signal of frequency f_0 is at least twice the frequency of the signal. Therefore, one of ordinary skill in the art would have been motivated to use a sampling rate which is at least twice the sampling rate of the higher frequency so as to cover the sampling rate requirement of the lower frequencies as well.

As to claim 26, Duruoz further discloses that the data streams are packetized elementary data streams (see Fig. 3) that include compressed video and audio data streams according to the MPEG standard (see column 1, lines 15-18).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEILA MALEK whose telephone number is (571)272-8731. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek
Examiner
Art Unit 2611

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